

SUPPORT FOR THE AMENDMENT

Support for claim 14 is found on page 7, lines 9-10 of the specification. Support for claim 15 is found on page 7, lines 29-30 of the specification. Support for claim 16 is found on page 8, lines 10-12 of the specification. Support for claim 17 is found on page 8, lines 27-32 of the specification. Support for claim 18 is found on page 9, lines 3-12 of the specification. Support for claim 19 is found on page 10, lines 9-11 of the specification. Support for claim 20 is found on page 10, lines 11-14 of the specification. Support for claim 21 is found on page 10, lines 15-18 of the specification. Support for claim 22 is found on page 10, lines 22-24 of the specification. Support for claim 23 is found on page 10, lines 31-32 of the specification.

No new matter would be added to this application by entry of this amendment.

Upon entry of the amendment, claims 6-23 will now be active in this application.

REQUEST FOR RECONSIDERATION

The claimed invention is directed to a production method for 5-(2'-pyridyl)-2-pyridone derivatives.

Applicants wish to thank examiner Davis for the helpful and courteous discussion held with their U.S. representative on August 21, 2008. At that time, applicants' U.S. representative argued the failure of the cited reference to suggest an organometallic compound formula (III) as claimed, the failure to suggest the 2-sulfonylpyridine compound of formula (IV) and that the referenced reaction is a Pd catalyzed reaction. The following is intended to expand upon the discussion with the examiner.

5-(2'-pyridyl)-2-pyridone compounds can be useful intermediates in the preparation of therapeutic drugs for nervous diseases. Efficient methods for their formation are sought.

The claimed invention addresses the problem by providing a method of preparing 5-(2'-pyridyl)-2-pyridone compounds by coupling an organometallic compound (III) with a 2-**sulfonyl**pyridine compound of formula (IV) followed by hydrolysis. Applicants have discovered that such a reaction to provide for 5-(2-pyridyl)-2-pyridone compounds in a convenient fashion. Such a process is nowhere disclosed nor suggested in the cited reference of record.

The rejection of claims 6-13 under 35 U.S.C. § 103(a) over Nagato et al. is respectfully traversed.

Nagato fails to disclose or suggest a process in which (1) an organometallic compound of formula (III) is reacted, (2) a 2-sulfonylpyridine compound is reacted, or (3) a coupling reaction may be conducted in the absence of a Pd catalyst.

Page 3 of the Official Action cites to Production Process 5 of Nagato as a basis for obviousness. According to this process, a **borane** compound (X) is coupled with a halogen

aryl or halogen heteroaryl in the presence of a base and a Pd catalyst (column 43, lines 42-46).

Applicants respectfully submit that the borane compound (X) does not suggest the claimed organometallic compound (III) in which M is a metal atom belonging to Group 1 of the periodic table. Borane is a Group III-A element not a Group 1 element.

In contrast, the claimed invention is directed to a production method for producing 1-(2'-pyridyl)-2-pyridone compounds in which an organometallic compound of a Group 1 metal is coupled with a 2-sulfonylpyridine. As the cited reference fails to disclose or suggest reaction of an organometallic compound of a Group 1 metal, the claimed invention is clearly not rendered obvious by this reference.

Furthermore, the reference fails to disclose or suggest reaction of a 2-sulfonylpyridine.

As noted above, the coupling reaction of Nagato et al. is of a halogenoaryl or halogenoheteroaryl. A halogenoaryl or a halogenoheteroaryl compound fail to disclose or suggest a 2-sulfonylpyridine compound of formula (IV).

In contrast, the claimed invention is directed to a process in which a 2-sulfonylpyridine compound is coupled with an organometallic compound (III). A sulfonyl group is not suggested by the halogen substitution of the reference and accordingly the claimed invention is not rendered obvious by this reference.

Furthermore, the claimed coupling of an organometallic compound (III) with a 2-sulfonylpyridine compound of formula (IV) may be conducted in the absence of a palladium catalyst.

The coupling step of Negato is conducted in the presence of a base and a palladium catalyst. The fact that the reference is a coupling of a borane compound and a halogenoaryl or halogenoheteroaryl compound conducted in the presence of a base and a palladium

catalyst further emphasizes the nonobviousness of the claimed process which is not the reaction of a borane compound, which is not the coupling of a halogenoaryl or a halogenoheteroaryl and is not catalyzed by palladium.

As the cited reference describes a significantly different reaction from that claimed, the claimed invention is clearly not rendered obvious from the reference and accordingly withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

The rejection of claims 6-13 under 35 U.S.C. § 112, second paragraph is obviated in part by appropriate amendment and is traversed in part.

With respect to issue B, applicants have now amended the claims to recite "compound" as suggested by the examiner. As to issue A, applicants note, that the claims recite that the compound of formula (I) is subjected to reacting with a brominating agent **to give** a 5-bromopyridine compound represented by formula (II), the compound (II) is subjected to reacting with a metalizing agent **to give** an organometallic compound of formula (III), which is then reacted with a 2-sulfonylpyridine of formula (IV) **to give** a 6-alkoxy-3,2-bipyridine of formula (V), which is then hydrolyzed. The process steps are believed to be sufficiently related. Withdrawal of these grounds of rejection is respectfully requested.

Applicants submit that this application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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